IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A diamond wafer assembly for use in a method of processing single crystal diamond substrates, comprising a plurality of single crystal CVD diamond plates fixed to a support layer in a substantially planar arrangement such that at least one of the major surfaces of the respective fixed single crystal diamond plates defines a fabrication surface that is exposed for further processing.

Claim 2 (Currently Amended): [[A]] The diamond wafer assembly according to claim 1, wherein only one of the major surfaces of the respective fixed single crystal diamond plates is exposed for further processing, the support layer forming a backing layer for the fixed single crystal diamond plates opposite the respective fabrication surfaces.

Claim 3(Currently Amended): [[A]] The diamond wafer assembly according to claim 1, wherein both of the major surfaces of the respective fixed single crystal diamond plates are exposed for further processing, the support layer extending between the respective single crystal diamond plates.

Claim 4 (Cancelled)

Claim 5 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of the preceding claims~~ claim 1, wherein the single crystal diamond plates are arranged in a predetermined array.

Claim 6 (Currently Amended): [[A]] The diamond wafer assembly according to claim 1, wherein [[the]] a predetermined array is regular and based on a two dimensional array of lattice points with one or more plates associated with each lattice point.

Claim 7 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of the preceding claims~~ claim 1, wherein the diamond wafer assembly is suitable for automatic wafer handling equipment and provides an orientation feature which is machine readable and provides orientation of the diamond wafer assembly about its normal axis within certain limits.

Claim 8 (Currently Amended): [[A]] The diamond wafer assembly according claim 7, wherein the machine readable orientation feature enables orientation to be achieved within a spread of 5°.

Claim 9 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of the preceding claims~~ claim 1, wherein the respective fabrication surfaces fall within a defined tolerance of a single conceptual plane.

Claim 10 (Currently Amended): [[A]] The diamond wafer assembly according to claim 9, wherein the tolerance of the respective fabrication surfaces to the conceptual plane is less than about 100 μm.

Claim 11 (Currently Amended): [[A]] The diamond wafer assembly according to claim 10, wherein the tolerance of the respective fabrication surfaces to the conceptual plane is less than about 10 μm.

Claim 12 (Currently Amended): [[A]] The diamond wafer assembly according to claim 11, wherein the tolerance of the respective fabrication surfaces to the conceptual plane is less than about 5 μm.

Claim 13 (Currently Amended): [[A]] The diamond wafer assembly according to claim 12, wherein the tolerance of the respective fabrication surfaces to the conceptual plane is less than about 3 μm.

Claim 14 (Currently Amended): [[A]] The diamond wafer assembly according to claim 13, wherein the tolerance of the respective fabrication surfaces to the conceptual plane is less than about 1 μm.

Claim 15 (Currently Amended): [[A]] The diamond wafer assembly according to claim 14, wherein the tolerance of the respective fabrication surfaces to the conceptual plane is less than about 0.2 μm.

Claim 16 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of the preceding claims~~ claim 1, wherein the single crystal diamond plates are arranged to butt together in a well-aligned array.

Claim 17 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of claims 1 to 15~~ claim 1, wherein the single crystal diamond plates are arranged in a well-aligned array and spaced from one another by a predetermined spacing.

Claim 18 (Currently Amended): [[A]] The diamond wafer assembly according to claim 17, wherein the support layer comprises a backing layer that extends into the spacing between the respective single crystal diamond plates so as to embed at least a portion of the single crystal diamond plates in the support layer.

Claim 19 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of the preceding claims~~ claim 1, wherein the support layer is a polycrystalline CVD diamond support layer.

Claim 20 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of the preceding claims~~ claim 1, wherein the single crystal diamond plates are arranged in a predetermined array and their physical alignment with respect to the wafer is within defined limits.

Claim 21 (Currently Amended): [[A]] The diamond wafer assembly according to claim 20, wherein the physical orientation of the single crystal diamond plates parallel to the plane of the support layer lies within a spread of 10°.

Claim 22 (Currently Amended): [[A]] The diamond wafer assembly according to claim 21, wherein the physical orientation of the single crystal diamond plates parallel to the plane of the support layer lies within a spread of 5°.

Claim 23 (Currently Amended): [[A]] The diamond wafer assembly according to claim 20 ~~any one of claims 20 to 22~~, wherein the physical orientation of the single crystal

diamond plates comprises alignment of fabrication faces of the plates with respect to the plane parallel to the surface of the backing layer to within a spread of 5°.

Claim 24 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of the preceding claims~~ claim 1, wherein the single crystal diamond plates are arranged in a predetermined array and their crystallographic alignment with respect to the wafer is within defined limits.

Claim 25 (Currently Amended): [[A]] The diamond wafer assembly according to claim 24, wherein the crystallographic orientation of the single crystal diamond plates parallel to the plane of the support layer lies within a spread of 10°.

Claim 26 (Currently Amended): [[A]] The diamond wafer assembly according to claim 25, wherein the crystallographic orientation of the single crystal diamond plates parallel to the plane of the support layer lies within a spread of 5°.

Claim 27 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of claims 24 to 26~~ claim 24, wherein the crystallographic orientation of the single crystal diamond plates comprises alignment of fabrication faces of the plates with respect to the plane parallel to the surface of the backing layer to within a spread of 5°.

Claim 28 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of the preceding claims~~ claim 1, wherein the single crystal diamond plates are bonded to the support layer by an adhesive means.

Claim 29 (Currently Amended): [[A]] The diamond wafer assembly according to claim 28, wherein the single crystal diamond plates are bonded to the support layer by glue or a metal braze.

Claim 30 (Currently Amended): [[A]] The diamond wafer assembly according to claim 28, wherein the single crystal diamond plates are bonded to the support layer by diamond-to-diamond bonding.

Claim 31 (Currently Amended): [[A]] The diamond wafer assembly according to ~~any one of claims 1 to 15 and 17 to 30~~ claim 1, wherein the assembly can be separated into one or more single crystal diamond substrates in which the support layer has a greater area than the single crystal diamond substrate(s).

Claim 32 (Currently Amended): [[A]] The diamond wafer assembly according to claim 31, wherein the single crystal diamond substrates attached to the support layer can be used in optical, thermal, mechanical or electronic applications, or combinations thereof.

Claims 33-51 (Cancelled)